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PROJECT NO. 52373

REVIEW OF WHOLESALE	§	**BEFORE THE**
	§	**PUBLIC UTILITY COMMISSION**
ELECTRIC MARKET DESIGN	§	**OF TEXAS**

EXECUTIVE SUMMARY

ERCOT STEEL MILLS' COMMENTS ON QUESTIONS RELATED TO DEMAND RESPONSE

- Effective and accurate wholesale price signals support effective demand response ("DR"). As a result, we recommend caution in making any changes to the current scarcity pricing structure that would dampen the scarcity pricing signal and could reduce the amount of DR that can be achieved during emergency conditions within ERCOT. For example, any reduction to the current System Wide Offer Cap ("SWOC") should be carefully considered in the context of its impact on the scarcity price signal to load and impact on DR overall. Such a reduction, if any, should be moderate and even a reduction to $6,000/MWh would be a major change. In addition, modifications, if any, made to the current shape of the ORDC should focus on keeping scarcity pricing limited to intervals of true scarcity so that market participants and retail consumers will continue to see a sufficient price signal to encourage voluntary DR when truly needed, while keeping power prices low and efficient during other times.
- Customer understanding and acceptance of DR programs is a key consideration. For effective DR programs: (1) program requirements must be simple to understand, (2) expected performance must be readily achievable and ascertainable, (3) compensation must be sufficient to induce loads to reduce consumption when needed, and (4) program ground rules must be stable. It will likely take years to grow effective new residential DR programs. Growing DR is truly a long-term proposition but with long-term benefits.
- To induce further growth in industrial and large commercial DR, new programs or additional program options should be created that complement and supplement the current programs, rather than attempting to overhaul the structure of the current programs and risking loss of DR participation in the process.
- Considerable care should be taken not to accidentally diminish the level of participation in current DR programs, like ERS, by implementing well-intentioned but problematic design changes. If any changes to ERS are truly deemed necessary, they should first be introduced through a "pilot project" process under which changes are thoroughly field-tested to ensure that the changes achieve their intended objectives and that loads are willing and able to participate under new rules. Moreover, any new requirements should ultimately be implemented as options that participants can choose for extra compensation.
- Examples of some possible new large consumer DR programs that could be considered include: (a) a DR alternative to Reliability Unit Commitment ("RUC"); and (b) a "power siesta" peak curtailment program.

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TO THE HONORABLE COMMISSIONERS:

NOW COMES the ERCOT Steel Mills ("Steel Mills") and submits these comments in response to the Commission staff's September 2, 2021, questions regarding demand response ("DR").

I. INTRODUCTION

We appreciate the opportunity to submit our response to the Commission staff's request for comments. The Steel Mills are a group of large steel production loads within ERCOT.[1] The Steel Mills have supported and continue to strongly support current DR programs and opportunities in ERCOT. In addition, we support establishing additional complementary actions and programs to further encourage DR. The Steel Mills also provide DR in ERCOT. For example, while the Steel Mills do not participate in ERCOT's Ancillary Services markets, we do participate in ERCOT's Emergency Response Service. The Steel Mills have actively participated in Commission and ERCOT processes related to DR for many years.

The Steel Mills offer below the following preliminary comments on certain of the questions outlined in the request (specifically as to questions 1, 2 and 5). Please note that we also address some of these issues in our Comments on Commission Questions on Wholesale Market Design filed on August 16, 2021, and incorporate by reference those comments as well. As it is early in this process, we reserve the right to offer additional ideas, suggestions and recommendations and change our position as consideration of these issues moves forward.

II. RESPONSE TO COMMISSION STAFF QUESTIONS

1. ***Describe existing and potential mechanisms for residential demand response in the ERCOT market.***

    a. ***Are consumers being compensated (in cash, credit, rebates, etc.) for their demand response efforts in any existing programs today, and if not, what kind of program would establish the most reliable and responsive residential demand response?***

[1] The Steel Mills purchase and consume large quantities of electricity to operate their respective mills and related support facilities. Given the highly energy-intensive nature of steel production, the Steel Mills have a strong interest in ensuring the continued reasonableness of energy costs for consumers as well as the ability of the ERCOT to maintain grid reliability and appropriate oversight of optimally structured wholesale markets for energy and ancillary services.

b. Do existing market mechanisms (e.g., financial cost of procuring real time energy in periods of scarcity) provide adequate incentives for residential load serving entities to establish demand response programs? If not, what changes should the Commission consider?

Existing market pricing mechanisms provide an important incentive for load serving entities ("LSEs") to offer DR opportunities to all retail consumers, including residential. The Texas energy-only wholesale market is designed to provide price signals for electricity on both a day-ahead and real-time basis, which permits consumers to plan their usage accordingly based on cost and includes scarcity pricing that incentivizes the conservation of energy by consumers (along with the production of more electricity by generators) when market conditions are tight. The scarcity price signals sent via the real-time clearing price of energy are essential to the preservation and growth of DR within ERCOT. Even if residential consumers are not directly exposed to these prices, real-time wholesale energy prices create a powerful motivation for LSEs to offer retail residential programs, including financial incentives, designed to curb consumption during scarcity periods. Of course, these price signals are also particularly important to encourage DR efforts by larger loads that procure energy based on prices that more directly reflect the wholesale market.

We strongly recommend that the Commission be especially careful not to make changes to the current wholesale pricing mechanism that would significantly dampen the scarcity pricing signal and could reduce the amount of DR achieved during scarcity and particularly emergency conditions. The Steel Mills recognize that the Commission will be considering whether to reduce the current system-wide offer cap ("SWOC"), possibly to a level significantly below $9,000/MWh and make other modifications to the pricing mechanism. To preserve a strong price signal for voluntary DR when the system is approaching emergency conditions, if there is to be a reduction, the Steel Mills recommend that the SWOC be reduced only moderately, and that modification if any, to the current shape of the Operating Reserve Demand Curve ("ORDC") focus on maintaining scarcity pricing only during periods of true scarcity (that is, not shift costs to non-scarcity intervals). In our estimation, even a one-third reduction in the SWOC, to $6,000/MWh, would be a major change in the market price signal. We urge caution related to changes in this regard, as it is difficult to anticipate how major changes to the energy pricing scheme in the ERCOT wholesale market will affect potential LSE DR and pricing programs as well as direct voluntary price response, particularly by loads. In our view, since maintaining and growing DR is a highly desirable policy goal, changes to market scarcity pricing mechanisms should not run counter to this objective and such mechanisms should be maintained or enhanced to provide clear scarcity pricing signals.

2. What market design elements are required to ensure reliability of residential demand response programs?

For competitive market DR programs to be effective (regardless of the type of consumer/load), consumer understanding and acceptance is key. Participation requirements have to be simple to understand,

performance has to be readily and straightforwardly achievable and ascertainable, compensation has to be sufficient to induce loads to curtail consumption when needed, and the ground rules for participation need to be stable.

We would expect that, with any new residential DR program, it will likely take years for the program to achieve desirable participation levels. Growing DR is truly a long-term proposition, but one which offers long term reliability benefit provided the program is carefully designed and administered to achieve a stable and growing base of program participants.

5. ***What changes should be made to non-residential load-side products, programs, or what programs should be developed to support reliability in the future?***

Industrial and large commercial classes currently have several options available to them for both active and voluntary passive DR participation within ERCOT, depending on their load characteristics and capabilities. Some examples of these industrial and large commercial DR vehicles include voluntary passive DR in response to real-time price signals, the provision of load-provided Responsive Reserve Service ("RRS"), and participation in the current Emergency Response Service ("ERS") program. The Steel Mills believe there are additional DR opportunities that can and should be created for industrial and large commercial customers which likely would result in additional DR during tight grid conditions. However, the existing DR programs do not need to be, and should not be, substantially modified or restructured in an attempt to increase participation (other than possibly increasing the annual program cap for ERS). Current programs already provide substantial benefits and should be maintained – the risk of any redesign of such programs should be avoided. Instead, new programs should be implemented which are tailored to attracting the precise types of additional DR loads targeted by ERCOT and/or the Commission.

As discussed earlier in these comments, growing DR within ERCOT is not an easy proposition, even for large loads. One reason for this is that commercial and industrial loads are not in the energy business. They make widgets, and their primary focus is upon cost efficient production of widgets. Another important consideration is that load characteristics and capabilities vary and are not exactly like generation. To the extent that DR programs can significantly assist a large customer in managing energy costs, the customer would have a clear financial incentive to conserve energy at times of scarcity, but the participation ground rules have to be clear, performance requirements have to be simple, compliance has to be easily achievable and the design of the program has to remain stable over the long term so that participants can gain experience with operating optimally and successfully under the program. Finally, the compensation paid has to be commensurate with the risk and additional cost assumed by the load in undertaking participation in the program. As DR programs grow, steps should be taken to ensure that compensation for participation encourages continued and increased participation and does not erode due to the failure to periodically increase program funding.

The ERS program provides is a good example of the time and energy required to create and administer a successful and effective DR program for large consumers. It took many years for the program to attract the level of participation that it currently exhibits. Under the Commission's current ERS rule (§25.507), the design of the program has long been left to the best judgment of the ERCOT professional staff. Over the years, the ERCOT staff has refined the program when deemed necessary but has left the basic design parameters largely unchanged to ensure continuity of participation and a broad understanding among large consumers of the risks and benefits of participating in the program. As a consequence, ERS has been successful in spurring commercial and industrial DR at the times when it has been most needed to help ensure continued grid reliability.

There are many good reasons why the current ERS program is designed the way it is currently designed, and care should be taken not to accidentally diminish the level of DR the program has achieved to date by implementing well-intentioned but problematic new design changes. In the past, when a significant design change has been considered for ERS, the ERCOT staff has introduced the changes through a "pilot project" process under which changes to the program structure are first field-tested to ensure that the changes achieve their intended objectives and that loads are willing to participate. The result has been growth in ERS program participation without the creation of additional unintended and unexpected negative consequences. If more benefits are desired from ERS (such as the right for ERCOT to dispatch earlier before an emergency), such concepts should be implemented as an option that the participant could select under the program, where those DR participants who are interested could sign up to provide the additional service for additional compensation. In such case, ERS participants who cannot provide the additional services would not be required to do so and those who can provide such additional service would obtain additional compensation.

Should the Commission wish to introduce additional DR opportunities for commercial and industrial customers, the Steel Mills recommend that the Commission do so by creating new programs or options with which to supplement the current programs, rather than attempting to overhaul the structure of the current programs and risking loss of DR participation in the process.

For instance, the Commission could consider introducing a new DR program that provides ERCOT with a load alternative to Reliability Unit Commitment ("RUC"). Under this concept, loads would provide ERCOT with offers to interrupt their load or significantly reduce consumption in a day-ahead process used to evaluate the forecasted reliability operation of the next day. This program would be used when ERCOT needs to reduce demand on peak for several hours. Loads can interrupt much faster than generation units that require hours to start and can be targeted to only the few hours on-peak. Pre-registered loads in such a program may provide ERCOT a less expensive alternative to using RUC for peak management. If selected by ERCOT, a load would be committed a full day ahead to self-interrupt their consumption for the specified number of hours without the need for further actions by ERCOT operators to actually deploy the load reduction in real-time. This gives certainty to ERCOT that these loads will indeed reduce consumption at the time needed and the load could plan its internal business operations accordingly.

Another option the Commission could consider is implementation of a "power siesta" program under which large commercial and industrial loads would contract with ERCOT to reduce or eliminate consumption during critical peak hour periods on the grid. Loads could contract, for instance, to shut down at certain designated times for certain days for a pre-determined contract term. This would give ERCOT operators yet another reliability tool for moderating peak demand in a predictable manner during system peak conditions. Such a program would be useful to ERCOT to offset the loss of significant amounts of generation capacity due to forced outages that could potentially last for an extended period.

Respectfully submitted,

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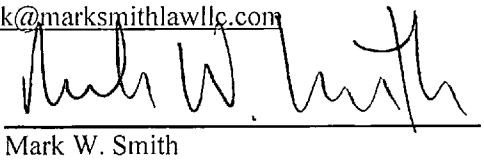
By: 

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